



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,859	09/06/2001	Bronwyn Jean Battersby	21415-0005	4713

26633 7590 07/16/2003

HELLER EHRMAN WHITE & MCAULIFFE LLP  
1666 K STREET,NW  
SUITE 300  
WASHINGTON, DC 20006

EXAMINER

EPPERSON, JON D

ART UNIT

PAPER NUMBER

1639

DATE MAILED: 07/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/856,859

Applicant(s)

BATTERSBY ET AL.

Examiner

Jon D Epperson

Art Unit

1639

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 and 30-62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                      | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                             | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>7, 13</u> . | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

**Please note:** The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to **Group Art Unit 1639**.

### *Status of the Application*

1. Receipt is acknowledged of a Response to a Restriction Requirement, which was dated on April 30, 2003 (Paper No. 14).

### *Priority Claims*

2. The priority filing date of 11/30/1998 for Australia PP7372 is acknowledged.

### *Status of the Claims*

3. Claims 1-62 are pending in the present application.
4. Applicant's response to the Restriction and/or Election of Species requirements in Paper Nos. 11 and 14 is acknowledged (Applicant's elected Group II, claims 15-29) and claims 1-14 and 30-62 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim (see below i.e.,

*Response to Restriction and/or Election of Species*).

Art Unit: 1639

5. Therefore, claims 15-29 are examined on the merits in this action. Please note that claims 15-29 are only examined to the extent of the elected species and/or subject matter (see MPEP § 803.02).

***Response to Restriction and/or Election of Species***

6. Applicant's election of Group I (claims 1-3) in Paper No. 11 is acknowledged.

7. The traversal is on the ground(s) that "they believe such rejection to be based upon a misreading of claim 1. Specifically, the Examiners states that Nova teaches combinations, called matrices with memories, of matrix materials with remotely addressable or remotely programmable recording devices for use in combinatorial chemistry. The matrix of Nova et al. reads on the instant carrier. The memory of Nova et al. reads on the instant attributes that are detectable and/or quantifiable. Nova et al. specifically discloses electromagnetic tags in proximity to the matrix. The combination of Nova comprise the matrix in physical contact with the memory in a covalent or non-covalent recording devices used in combinatorial chemistry. The examiner then contends that Nova's matrix reads on applicants' attributes.

Turning to applicants' claims, applicants point out that each pending independent claim recites a carrier which has at least two attributes integrally associated therewith that are detectable and/or quantifiable. In contrast, the memory of Nova equates only to a single attribute. Thus Nova has no adverse impact on the inventiveness of the claimed subject matter."

Art Unit: 1639

8. These arguments were fully considered but were not found persuasive. The Examiner does not agree that Nova discloses only one attribute. Furthermore, there are more references that read on Applicants claims that show the feature that links Applicants claims is not a special technical feature (e.g., see 35 U.S.C. § 102 rejection under Dower et al, which fully anticipates Applicants claimed invention).

9. Applicant's election of species in Paper No. 14 with traverse is also acknowledged.

10. The election of species traversal is on the ground(s) that "applicants were fully responsive to the requirement as it was set forth at page 6, paragraph 11 of the Restriction Requirement dated November 13, 2002 ... Applicants provided the level of detail exemplified by the examiner, and applicants would have been most appreciative if the examiner had expressly required in the November paper a more detailed election if one was so required ... [furthermore] Applicants traverse this requirement on the grounds that the examiner has not permitted applicants to secure examination of a reasonable number of species, which is a requirement of 37 CFR § 1.146" (see Paper No. 7, page 2).

11. These arguments were fully considered but were not found persuasive. As an initial matter the Examiner notes that the Examiner could not have "expressly required in the November paper a more detailed election if one was so required" because the present Examiner did not write that Office Action (i.e., there was a change in Examiners). The Examiner apologizes for any inconvenience to Applicants as a result of this change.

Art Unit: 1639

Furthermore, the species election is for search purposes and that electing broad categories like “optically detectable dyes” would include almost an infinite number of compounds, which would be an unreasonable number of species.

12. As a result, the restriction requirement and/or election of species is still deemed proper and is therefore made FINAL.

#### ***Information Disclosure Statement***

13. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98 (b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, “the list may not be incorporated into the specification but must be submitted in a separate paper.” Therefore, unless the references have been cited by the examiner on the form PTO-892, they have not been considered.

14. The references listed on applicant’s PTO-1449 form have been considered by the Examiner. A copy of the form is attached to this Office Action.

#### ***Specification***

15. The abstract is missing. See MPEP § 608.01.

Art Unit: 1639

16. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claims Rejections - 35 U.S.C. 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. Claims 15-25, 27 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Dower et al (U.S. Patent 5,708,153).

For *claims 15-16*, Dower et al discloses synthetic oligomer library that incorporates identifier tags (see Dower et al, column 7, lines 57-67 to column 8, lines 1-7; figure 2). Dower et al discloses apportioning the supports (carriers) among a plurality of reaction vessels; exposing the supports in each reaction vessel to a first oligomer monomer and to a first identifier tag (reporter) monomer; pooling the supports; exposing the supports to a second oligomer monomer and to a second identifier tag monomer; exposing the supports to a second oligomer monomer and to a second identifier tag monomer (i.e., using split-mix technology). The identifier tag may be attached by means of a linker (physical or chemical attachment) that has an appropriate functional group at each end, one for the attachment to the support and the other for the attachment to the

identifier tag (see column 7, lines 50-54). The identifier tag may be any recognizable feature such as microscopically distinguishable in shape, size, color (reads on electromagnetic radiation-related), or optical density, which reads on Applicants limitation “characterized by at least two detectable and/or quantifiable attributes associated with the carrier, with the proviso that one of said attributes is other than shape” (see column 4, lines 24-36). Two or more distinctly different populations of solid support may be used. Here, one of the attributes is fluorescence or color and the other is shape. (Please note that Applicants claims do NOT rule out using shape as a limitation, they only rule out that ONE of the attributes cannot be shape while the other attribute can). Therefore, Dower et al anticipates claims 15-16.

For *claims 17-19, 21*, Dower et al discloses “fluorescent tags” including Applicants’ elected species fluorescein isothiocyanate (see column 17, lines 35-36; see column 19, line 30).

For *claim 20*, Dower et al discloses size, shape and fluorescence, which would read on Applicants three detectable and/or quantifiable attributes.

For *claim 22*, Dower et al discloses “colloidal” carrier particles (see column 10, line 49).

For *claim 23*, Dower et al discloses different shapes including “spherical” (see column 6, line 56).

For *claim 24*, Dower et al discloses “pellets” (see column 6, line 53).

For *claim 25*, Dower et al discloses carriers with “different sizes” (see column 13, line 32; see also column 4, line 30).

Art Unit: 1639

For *claim 27*, Dower et al discloses “silica” beads (see column 18, line 16).

For *claim 29*, Dower et al discloses amines and thiols (see column 12, line 47).

18. Claims 15-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Zarling et al (U.S. Patent 5,674,698).

For *claims 15-16*, Zarling et al discloses compositions (i.e., libraries) comprising fluorescent organic dyes (reporters) attached to an inorganic up-converting phosphor (carrier, including ceramics) (e.g., see column 8, lines 8-22). Zarling discloses that the fluorescent organic dyes maybe adsorbed to the inorganic up-converting phosphor crystal and/or attached to a coated inorganic up-converting phosphor crystal (see column 18, lines 55-67 to column 19, lines 1-3; see also column 19, lines 62-66; see also figure 9). Several phosphors/dyes are selected which have overlapping absorption bands which allows simultaneous excitation at one wevelenght, but which vary in emission characteristics such that each probe-label species is endowed with a distinguishable fluorescent “fingerprint” (see column 7, lines 30-35), which reads on Applicants limitation for having at least two quantifiable attributes because more than one dye is being quantified. Furthermore, other quantifiable attributes in addition to the dyes would be size, shape, etc. (Please note that Applicants claims do NOT rule out using shape as a limitation, they only rule out that ONE of the attributes cannot be shape while the other attribute can). Therefore, Zarling et al anticipates claims 15-16.

Art Unit: 1639

19. Claims 15-25, 27 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Nova et al (U.S. Patent 5,674,698).

For claims 15-29, Nova et al disclose “[c]ombinations, call matrices with memories, of matrix materials with remotely addressable or remotely programmable recording devices” for use in combinatorial chemistry (see Abstract). The “matrix” of Nova et al reads on the instant “carrier”, see, for example, Nova et al column 10, line 49 through column 11, line 20. The “memory” of Novae et al reads on the instant “attributes” that are “detectable and/or quantifiable”, see, for example, column 11, line 33 through column 12, line 40 of the reference. Hove specifically discloses electromagnetic tags in proximity to the matrix (column 12, lines 23-40 and 55-59). The “combinations” of Nova comprise the matrix in physical contact with the memory in a covalent or non-covalent fashion (see column 5, line 53 through column 6, line 29).

Also, the “matrices with memories” are additionally covalently or non-covalently bound to a molecule or biological particle (column 6, lines 31-40). The information in the memory of Nova identifies or tracks the biological particle or molecule (column 12, lines 60-67). Specific use o the “matrices with memories” in combinatorial chemistry is disclosed, for example, in column 7, line 47-67 and Figures 1-4.

### *Response*

20. Applicants argue that Nova does not disclose “at least two detectable and/or quantifiable attributes” (see Paper No. 11, paragraph 3).

Art Unit: 1639

The Examiner contends that the reference does disclose at least two because at the very least Nova et al disclose electromagnetic tags, which reads on one attribute and Nova discloses particles with a definite size and shape, which reads on at least two more attributes. Please note that Applicants claims DO NOT rule out that at least one of the attributes may be shape and/or size because the claim is worded to exclude shape from one of the attributes, but not both.

***Contact Information***

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon D Epperson whose telephone number is (703) 308-2423. The examiner can normally be reached Monday-Friday from 9:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on (703) 306-3217. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2439.

Jon D. Epperson, Ph.D.  
July 13, 2003

**BENNETT CELSA  
PRIMARY EXAMINER**

A handwritten signature in black ink, appearing to be 'Bennett Celsa', written over the printed name and title.